

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/583,202
Source: JFWP
Date Processed by STIC: 6/27/06

ENTERED



IFWP

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/583,202

DATE: 06/27/2006

TIME: 12:05:32

Input Set : A:\SEQLIST.TXT

Output Set: N:\CRF4\06272006\J583202.raw

4 <110> APPLICANT: Murdoch University
 5 Novartis Animal Health US, Inc.
 6 Hampson, David John
 7 La, Tom
 9 <120> TITLE OF INVENTION: Brachyspira pilosicoli 72 kDa outer
 10 membrane protein and diagnostic and therapeutic uses
 11 thereof.
 13 <130> FILE REFERENCE: 34141A
 C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/583,202
 C--> 15 <141> CURRENT FILING DATE: 2006-06-16
 15 <150> PRIOR APPLICATION NUMBER: PCT/AU2004/001783
 16 <151> PRIOR FILING DATE: 2004-12-17
 18 <150> PRIOR APPLICATION NUMBER: AU2003907017
 19 <151> PRIOR FILING DATE: 2003-12-19
 21 <160> NUMBER OF SEQ ID NOS: 38
 23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 1750
 27 <212> TYPE: DNA
 28 <213> ORGANISM: Brachyspira pilosicoli
 30 <400> SEQUENCE: 1
 31 atgagtagctt taataaaagaa aatcgtagct tatatacgctt taatctcttt tagtttttagc 60
 32 gtattacctg ctcaaactta tggatgatgcg gctagaattaat ctggagaagc tgagacttta 120
 33 caaaaatgacg gagaatacca aaagtcttat gataaatctc aagaggcttc tgactctata 180
 34 gataaaaacta ctgtatcatt attttataga ttaatgaact taagaatagc taaagcaaaa 240
 35 aatgatgcaa ataagactat taatgaaata gaacaattag gtgcttctac tgataatgaa 300
 36 tttaaaaacaa aatatcaaga agctctaaaa ttcttgaag aaggaaataa tagtattact 360
 37 aacttacctc cagaaccgca aactcctcct acagatgaag agttaactgc ttcttcaaacc 420
 38 acattcacta cagttatataa ttctttcaac aatgcttac aatctgctaa cagtgaaaa 480
 39 gaaggttatac ttaatagaga aagagcaata gcttcaaaat ccattaatga tgctagaaac 540
 40 aaatataaaag cagaattagg caagagtgtt aagcaggcg atgctaatga tagaaatatt 600
 41 aatggtgctt taactagagc tggatgatgc cttagcaatg acaattttgc aagcgttcag 660
 42 cagaatgtat ctactgcatt agctggtata aataaagcta tagcagatgc taaggcgaaa 720
 43 gctgaggcag aagctaaagc aaaagctgtt gctgaagcta aggcaagagc tgaagcagag 780
 44 gctaaagcga aagcagaagc tgctgtctaa gctaaagctg aagcagaggc taaagcgaaa 840
 45 gcagatgcaa tagcaaaagc taaaaaagac atagaagatg cacaaaataa atataataat 900
 46 ttagttaatg atcaagtaat agctaaaggat gatgataatg ataaaaacgt atcaaaaactt 960
 47 ttaactgtat ctaataatgc ttacaaaactcctcaaa ctgcaagcga taaagcttta 1020
 48 gaagcttcta aaactatgga taatataatta aacactgcta atcaattgaa aaaagaagaa 1080
 49 gctgttaaaa atcttagagca attaaaggca agaagagaca gacttataag cgaagggtat 1140
 50 ttaactaaag acagcgaaga agaacaaaag ttatctcaaa ctataaaaga agctgaagat 1200
 51 gctttaaata acaatgatta tggtagctt gaccaaaaaa tgcaggaagc taatcttaac 1260
 52 atgaatgcta tagaagagag aggacctatt gacggacaag ttataccctgg tgaaatggc 1320

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53 ggtaacgaaa ctggtcaa at aattgtatgc actactggc aagaagtaaa tacagaagga 1380
 54 aaagttactg tattaccta atattatgtt gtagtaagaa gagtacctct aactgtatgc 1440
 55 ttatggagaa ttgctggata cagctacata tacaacaacc ctatagaatg gtacagaata 1500
 56 tatgaagcta acagaaaatgt acttagagac cctaataacc ctgatttaat acttcctgg 1560
 57 caaagattaa taataccatg ccttaatggt gaagagagaa gcggtgatta taatcctgat 1620
 58 ttagagtatt tgacttatga tgaggtatg cagttagac agcaaaataa cactactcaa 1680
 59 gcacaacagt aagaaataaa cttataaaat acaaaaggc atgcattaa tatgtatgac 1740
 60 ctttttttgt 1750
 62 <210> SEQ ID NO: 2
 63 <211> LENGTH: 564
 64 <212> TYPE: PRT
 65 <213> ORGANISM: Brachyspira pilosicoli
 67 <400> SEQUENCE: 2
 68 Met Ser Thr Leu Ile Lys Lys Ile Val Ala Tyr Ile Ala Leu Ile Ser
 69 1 5 10 15
 70 Phe Ser Phe Ser Val Leu Pro Ala Gln Thr Tyr Asp Asp Ala Ala Arg
 71 20 25 30
 72 Ile Thr Gly Glu Ala Glu Thr Leu Gln Asn Asp Gly Glu Tyr Gln Lys
 73 35 40 45
 74 Ser Tyr Asp Lys Ser Gln Glu Ala Ser Asp Ser Ile Asp Lys Thr Thr
 75 50 55 60
 76 Val Ser Leu Phe Tyr Arg Leu Met Asn Leu Arg Ile Ala Lys Ala Lys
 77 65 70 75 80
 78 Asn Asp Ala Asn Lys Thr Ile Asn Glu Ile Glu Gln Leu Gly Ala Ser
 79 85 90 95
 80 Thr Asp Asn Glu Phe Lys Thr Lys Tyr Gln Glu Ala Leu Lys Phe Phe
 81 100 105 110
 82 Glu Glu Gly Asn Asn Ser Ile Thr Asn Leu Pro Pro Glu Pro Gln Thr
 83 115 120 125
 84 Pro Pro Thr Asp Glu Glu Phe Thr Ala Ser Ser Asn Thr Phe Thr Thr
 85 130 135 140
 86 Val Tyr Asn Ser Phe Asn Asn Ala Leu Gln Ser Ala Asn Ser Val Lys
 87 145 150 155 160
 88 Glu Gly Tyr Leu Asn Arg Glu Arg Ala Ile Ala Ser Lys Ser Ile Asn
 89 165 170 175
 90 Asp Ala Arg Asn Lys Tyr Lys Ala Glu Leu Gly Lys Ser Val Lys Ala
 91 180 185 190
 92 Gly Asp Ala Asn Asp Arg Asn Ile Asn Gly Ala Leu Thr Arg Ala Asp
 93 195 200 205
 94 Glu Ala Leu Ser Asn Asp Asn Phe Ala Ser Val Gln Gln Asn Val Ser
 95 210 215 220
 96 Thr Ala Leu Ala Gly Ile Asn Lys Ala Ile Ala Asp Ala Lys Ala Lys
 97 225 230 235 240
 98 Ala Glu Ala Glu Ala Lys Ala Lys Ala Ala Glu Ala Lys Ala Arg
 99 245 250 255
 100 Ala Glu Ala Glu Ala Lys Ala Lys Ala Glu Ala Ala Ala Lys Ala Lys
 101 260 265 270
 102 Ala Glu Ala Glu Ala Lys Ala Lys Ala Asp Ala Ile Ala Lys Ala Lys
 103 275 280 285

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104 Lys Asp Ile Glu Asp Ala Gln Asn Lys Tyr Asn Asn Leu Val Asn Asp
105      290          295          300
106 Gln Val Ile Ala Lys Gly Asp Asp Asn Asp Lys Asn Val Ser Lys Leu
107      305          310          315          320
108 Leu Thr Asp Ala Asn Asn Ala Leu Gln Asn Thr Pro Gln Thr Ala Ser
109          325          330          335
110 Asp Lys Ala Leu Glu Ala Ser Lys Thr Met Asp Asn Ile Leu Asn Thr
111          340          345          350
112 Ala Asn Gln Leu Lys Lys Glu Glu Ala Val Lys Asn Leu Glu Gln Leu
113          355          360          365
114 Lys Ala Arg Arg Asp Arg Leu Ile Ser Glu Gly Tyr Leu Thr Lys Asp
115          370          375          380
116 Ser Glu Glu Glu Gln Lys Leu Ser Gln Thr Ile Lys Glu Ala Glu Asp
117      385          390          395          400
118 Ala Leu Asn Asn Asn Asp Tyr Val Leu Ala Asp Gln Lys Met Gln Glu
119          405          410          415
120 Ala Asn Leu Asn Met Asn Ala Ile Glu Glu Arg Gly Pro Ile Asp Gly
121          420          425          430
122 Gln Val Ile Pro Gly Glu Met Gly Asn Glu Thr Gly Gln Ile Ile
123          435          440          445
124 Asp Ala Thr Thr Gly Gln Glu Val Asn Thr Glu Gly Lys Val Thr Val
125          450          455          460
126 Leu Pro Gln Tyr Tyr Val Val Val Arg Arg Val Pro Leu Thr Asp Ala
127      465          470          475          480
128 Leu Trp Arg Ile Ala Gly Tyr Ser Tyr Ile Tyr Asn Asn Pro Ile Glu
129          485          490          495
130 Trp Tyr Arg Ile Tyr Glu Ala Asn Arg Asn Val Leu Arg Asp Pro Asn
131          500          505          510
132 Asn Pro Asp Leu Ile Leu Pro Gly Gln Arg Leu Ile Ile Pro Ser Leu
133          515          520          525
134 Asn Gly Glu Glu Arg Ser Gly Asp Tyr Asn Pro Asp Leu Glu Tyr Leu
135          530          535          540
136 Thr Tyr Asp Glu Val Met Gln Leu Arg Gln Gln Asn Asn Thr Thr Gln
137      545          550          555          560
138 Ala Gln Gln Glx
142 <210> SEQ ID NO: 3
143 <211> LENGTH: 32
144 <212> TYPE: PRT
145 <213> ORGANISM: Brachyspira pilosicoli
147 <220> FEATURE:
148 <223> OTHER INFORMATION: mp-72 protein fragment
150 <400> SEQUENCE: 3
151 Lys Val Thr Val Leu Pro Gln Tyr Tyr Val Val Val Arg Arg Val Pro
152      1           5           10          15
153 Leu Thr Asp Ala Leu Trp Arg Ile Ala Gly Tyr Ser Tyr Ile Tyr Asn
154          20          25          30
157 <210> SEQ ID NO: 4
158 <211> LENGTH: 22
159 <212> TYPE: PRT

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160 <213> ORGANISM: Brachyspira pilosicoli
162 <220> FEATURE:
163 <223> OTHER INFORMATION: mp-72 protein fragment
165 <400> SEQUENCE: 4
166 Leu Ile Lys Lys Ile Val Ala Tyr Ile Ala Leu Ile Ser Phe Ser Phe
167 1 5 10 15
168 Ser Val Leu Pro Ala Gln
169 20
172 <210> SEQ ID NO: 5
173 <211> LENGTH: 13
174 <212> TYPE: PRT
175 <213> ORGANISM: Brachyspira pilosicoli
177 <220> FEATURE:
178 <223> OTHER INFORMATION: mp-72 protein fragment
180 <400> SEQUENCE: 5
181 Lys Thr Thr Val Ser Leu Phe Tyr Arg Leu Met Asn Leu
182 1 5 10
185 <210> SEQ ID NO: 6
186 <211> LENGTH: 7
187 <212> TYPE: PRT
188 <213> ORGANISM: Brachyspira pilosicoli
190 <220> FEATURE:
191 <223> OTHER INFORMATION: mp-72 protein fragment
193 <400> SEQUENCE: 6
194 Asn Asp Gln Val Ile Ala Lys
195 1 5
198 <210> SEQ ID NO: 7
199 <211> LENGTH: 14
200 <212> TYPE: PRT
201 <213> ORGANISM: Brachyspira pilosicoli
203 <220> FEATURE:
204 <223> OTHER INFORMATION: mp-72 protein fragment
206 <400> SEQUENCE: 7
207 Asp Leu Ile Leu Pro Gly Gln Arg Leu Ile Ile Pro Ser Leu
208 1 5 10
211 <210> SEQ ID NO: 8
212 <211> LENGTH: 8
213 <212> TYPE: PRT
214 <213> ORGANISM: Brachyspira pilosicoli
216 <220> FEATURE:
217 <223> OTHER INFORMATION: mp-72 protein fragment
219 <400> SEQUENCE: 8
220 Asn Asp Tyr Val Ala Leu Asp Gln
221 1 5
224 <210> SEQ ID NO: 9
225 <211> LENGTH: 18
226 <212> TYPE: PRT
227 <213> ORGANISM: Brachyspira pilosicoli
229 <220> FEATURE:

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Input Set : A:\SEQLIST.TXT
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230 <223> OTHER INFORMATION: mp-72 protein fragment
232 <400> SEQUENCE: 9
233 Phe Ala Ser Val Gln Gln Asn Val Ser Thr Ala Leu Ala Gly Ile Asn
234 1 5 10 15
235 Lys Ala
239 <210> SEQ ID NO: 10
240 <211> LENGTH: 6
241 <212> TYPE: PRT
242 <213> ORGANISM: Brachyspira pilosicoli
244 <220> FEATURE:
245 <223> OTHER INFORMATION: mp-72 protein fragment
247 <400> SEQUENCE: 10
248 Val Ser Lys Leu Leu Thr
249 1 5
252 <210> SEQ ID NO: 11
253 <211> LENGTH: 13
254 <212> TYPE: PRT
255 <213> ORGANISM: Brachyspira pilosicoli
257 <220> FEATURE:
258 <223> OTHER INFORMATION: mp-72 protein fragment
260 <400> SEQUENCE: 11
261 Asp Leu Glu Tyr Leu Thr Tyr Asp Glu Val Met Gln Leu
262 1 5 10
265 <210> SEQ ID NO: 12
266 <211> LENGTH: 8
267 <212> TYPE: PRT
268 <213> ORGANISM: Brachyspira pilosicoli
270 <220> FEATURE:
271 <223> OTHER INFORMATION: mp-72 protein fragment
273 <400> SEQUENCE: 12
274 Asn Ala Leu Gln Ser Ala Asn Ser
275 1 5
278 <210> SEQ ID NO: 13
279 <211> LENGTH: 7
280 <212> TYPE: PRT
281 <213> ORGANISM: Brachyspira pilosicoli
283 <220> FEATURE:
284 <223> OTHER INFORMATION: mp-72 protein fragment
286 <400> SEQUENCE: 13
287 Asp Gly Gln Val Ile Pro Gly
288 1 5
291 <210> SEQ ID NO: 14
292 <211> LENGTH: 7
293 <212> TYPE: PRT
294 <213> ORGANISM: Brachyspira pilosicoli
296 <220> FEATURE:
297 <223> OTHER INFORMATION: mp-72 protein fragment
299 <400> SEQUENCE: 14
300 Val Lys Asn Leu Glu Gln Leu

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/583,202

DATE: 06/27/2006

TIME: 12:05:33

Input Set : A:\SEQLIST.TXT

Output Set: N:\CRF4\06272006\J583202.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date